

# Mesh three-dimensional arm orthosis with built-in ultrasound physiotherapy system

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## Abstract

© Published under licence by IOP Publishing Ltd. The possibility of using the built-in ultrasound physiotherapy system of the hand orthosis is explored in the work. The individual mesh orthosis from nylon 12 was manufactured by the 3D prototyping method on the installation of selective laser sintering SLS SPro 60HD. The applied technology of three-dimensional scanning made it possible to obtain a model of the patient's hand and on the basis of it to build a virtual model of the mesh frame. In the course of the research, the developed system of ultrasound exposure was installed on the orthosis and its tests were carried out. As a result, the acceleration of the healing process and the reduction in the time of wearing orthosis were found.

<http://dx.doi.org/10.1088/1757-899X/240/1/012036>

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